Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1. (currently amended) A method of controlling the transmission of a light signal, comprising:

(a) transmitting said light signal through a first fiber optic line; and

(b) receiving said light signal with a light receiving unit operatively coupled to said first fiber optic line, said light receiving unit being operative to refract said light signal so that said light signal is substantially prevented from being transmitted through said light receiving unit if an intensity level of said light signal has a predetermined relationship with an intensity threshold level, such that when the intensity level of the received light signal is on one side of the intensity threshold level, the light signal is substantially prevented from being transmitted, and when the intensity level of the received light signal is on an opposite side of the intensity threshold level, the light signal is substantially permitted to be transmitted, there being a substantial change in the amount of the received light signal that is transmitted as the intensity level of the received light signal passes through the intensity threshold level.

Claim 2. (original) The method of claim 1, further comprising:

(c) generating said light signal with an electrooptical converter operatively coupled to said first fiber optic line.

Claim 3. (original) The method of claim 1, further comprising:

(d) transmitting said light signal through a second fiber optic line which is operatively coupled to said light receiving unit if said light receiving unit does not refract said light signal.

Claim 4. (original) The method of claim 3, further comprising:

(e) receiving said light signal with an electrooptical converter operatively coupled to said second fiber optic line.

Claim 5. (original) The method of claim 1, wherein:

(b) includes raising said intensity level of said light signal so that said intensity level of said light signal is greater than said intensity threshold level and said light receiving unit refracts said light signal so as to substantially prevent said light signal from being transmitted through said light receiving unit.

Claim 6. (original) The method of claim 1, wherein:

said light receiving unit includes a first optical material and a second optical material having an interface therebetween,

said first optical material has a linear index of refraction,

said second optical material has a nonlinear index of refraction which is dependent on said intensity level of said light signal, and

(b) includes refracting said light signal at said interface if said linear index of refraction of said first optical material does not match said nonlinear index of refraction of said second optical material.

Claim 7. (original) The method of claim 5, wherein:

(b) also includes lowering said intensity level of said light signal so that said intensity level of said light signal is less than said intensity threshold level and said light receiving unit does not refract said light signal such that said light signal is transmitted through said light receiving unit.

Claim 8. (currently amended) An arrangement for controlling the transmission of a light signal, comprising:

a first fiber optic line for transmitting said light signal; and

a light receiving unit operatively coupled to said first fiber optic line so that said light signal is received by said light receiving unit, said light receiving unit being operative to refract said light signal so that said light signal is substantially prevented from being transmitted through said light receiving unit if an intensity level of said light signal has a predetermined relationship with an intensity threshold level, such that when the intensity level of the received light signal is on one side of the intensity threshold level, the light signal is substantially prevented from being transmitted, and when the intensity level of the received light signal is on an opposite side of the intensity threshold level, the light signal is substantially permitted to be transmitted, there being a substantial change in the amount of the received light signal that is transmitted as the intensity level of the received light signal passes through the intensity threshold level.

Claim 9. (original) The arrangement of claim 8, further comprising:

an electrooptical converter operatively coupled to said first fiber optic line, wherein said electrooptical converter generates said light signal such that said light signal is transmitted through said first fiber optic line.

Claim 10. (original) The arrangement of claim 8, further comprising:

a second fiber optic line operatively coupled to said light receiving unit such that if said light receiving unit does not refract said light signal said light signal is transmitted through said second fiber optic line.

Claim 11. (original) The arrangement of claim 10, further comprising:

an electrooptical converter operatively coupled to said second fiber optic line such that said electrooptical converter receives said light signal if said light receiving unit does not refract said light signal.

Claim 12. (original) The arrangement of claim 8, wherein:

said light receiving unit includes a first optical material and a second optical material having an interface therebetween,

said first optical material has a linear index of refraction,

said second optical material has a nonlinear index of refraction which is dependent on said intensity level of said light signal received with said light receiving unit, and

said light signal is refracted at said interface if said linear index of refraction of said first optical material does not match said nonlinear index of refraction of said second optical material.

Claim 13. (original) An optical switch arrangement for controlling the transmission of a light signal, comprising:

a first fiber optic line for transmitting said light signal; and

a light receiving unit operatively coupled to said first fiber optic line so that said light signal is received by said light receiving unit, wherein (i) said light receiving unit includes a first optical material and a second optical material having an interface therebetween, (ii) said first optical material has a linear index of refraction, (iii) said second optical material has a nonlinear index of refraction which is dependent on an intensity level of said light signal received with said light receiving unit, and (iv) said light signal is refracted at said interface such that said light signal is substantially prevented from being transmitted through said light receiving unit if said linear index of refraction of said first optical material does not match said nonlinear index of refraction of said second optical material.

Claim 14. (original) The arrangement of claim 13, further comprising:

an electrooptical converter operatively coupled to said first fiber optic line, wherein said electrooptical converter generates said light signal such that said light signal is transmitted through said first fiber optic line.

Claim 15. (original) The arrangement of claim 13, further comprising:

a second fiber optic line operatively coupled to said light receiving unit such that if said light receiving unit does not refract said light signal said light signal is transmitted through said second fiber optic line.

Claim 16. (original) The arrangement of claim 15, further comprising:
an electrooptical converter operatively coupled to said second fiber optic line such that said electrooptical converter receives said light signal if said light receiving unit does not refract said light signal.

Claim 17. (original) The arrangement of claim 13, wherein:

said light receiving unit refracts said light signal so as to substantially prevent said light signal from being transmitted through said light receiving unit when said intensity level of said light signal is greater than said intensity threshold level.

Claim 18. (original) The arrangement of claim 13, wherein:

said light receiving unit is positioned within a lumen defined by said first fiber optic line.

Claim 19. (original) The arrangement of claim 13, wherein:

said first optical material includes quartz.

Claim 20. (original) The arrangement of claim 13 wherein:

said second optical material includes a material selected from the group of materials consisting of MBBA, MEBBA, PePmeOB, and BuPPeB.

Claim 21. (original) An optical communications system for transmitting information, comprising:

an optical switch arrangement for controlling transmission of a light signal, wherein said optical switch arrangement includes (i) a fiber optic line for transmitting

said light signal and (ii) a light receiving unit operatively coupled to said fiber optic line so that said light signal is received by said light receiving unit, wherein (A) said light receiving unit includes a first optical material and a second optical material having an interface therebetween, (B) said first optical material has a linear index of refraction, (C) said second optical material has a nonlinear index of refraction which is dependent on an intensity level of said light signal received with said light receiving unit, and (D) said light signal is refracted at said interface such that said light signal is substantially prevented from being transmitted through said light receiving unit if said linear index of refraction of said first optical material does not match said nonlinear index of refraction of said second optical material.